

# Prior to the Workshop:

- 1. Survey parks for Management Issues and Monitoring Activities
- 2. Compile/summarize park data: species-of-concern, exotic plants, ozone sensitive plants, NPSpecies, etc
- 3. Review Enabling Legislation, RMP, GPRA, RPRS, Nature Bib, etc.
- 4. Contact subject matter experts: water resources, air resources, exotics, fire, birds, communities-species of concern, etc.
- 5. Prepare notebooks, GIS Display Maps, table summaries, threats, etc.





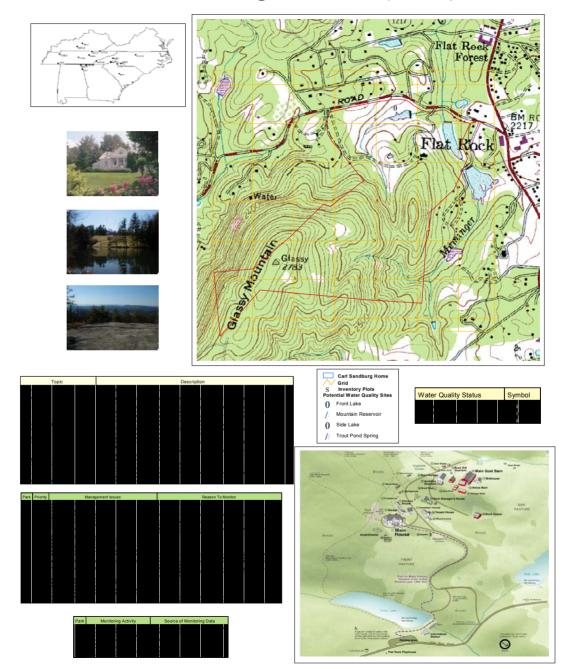
PARK	PRIORITY	MANAGEMENT ISSUES	REASON
SHIL	High	ADJACENT LANDUSE IMPACTS	IVA and Pickwick Power (PPILC) just filed a Notice of Intent to construct a Fossil fuel (coal fired) electric generating power plant at Hamburg Landing, within 1.5 miles of Shiloh NMP. Hardin County has traditionally opposed historic zoning measure. Therefore the park is threatened by any proposal to develop lands near, or within site of the battlefield. In addition, large sections of native hardwood forest has been cut and replaced with introduces.
			pine. This activity has potential to significantly affect conditions on the park.
SHIL	High	AIR RESOURCES MANAGEMENT	The PCA Pulp Mill is located 5 miles southeast of the park. Although prevailing westerly winds carry most emissions away from the park. Advancing low-pressure systems blow emissions (through south and easterly winds) across and onto the park. In addition, the proposed fossil fuel electric generation plant.
SHIL	High	CONTROL OF POACHING AND THEFT OF NATURAL RESOURCES	Poaching of whitetail deer has increased. Theft of other natural resources has not been found to a significant problem.
SHIL	High	CULTURAL LANDSCAPE MANAGEMENT	Shilon protects one of the best preserved battlefield landscapes in the nation. Management of the "history of the battle on the grad where it was fought" is mandated in the park's enabling legislation. In addition, a new Corinth unit is under development. Additional lands will most likely be added to the national military park.
SHIL	High	DISTURBED AREA REHABILITATION	The park is actively involved in land acquisition both at the Shiloh unit in Tennessee, and in the process of planning for the new Corinth unit in Mississippi. A portion of the lands being proposed for acquisition will need rehabilitation.
SHIL	Low	EXOTIC ANIMAL MANAGEMENT	An occasional Emu strays onto the park from an adjoining farm. Rangers dispatch these animals.

## PARK SURVEY OF MANAGEMENT ISSUES:

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## **Carl Sandburg Home NHS (CARL)**

GIS Poster to display at workshop





#### **AGENDA**

# VITAL SIGNS WORKSHOP – Identification of Park Monitoring Needs Mammoth Cave National Park May 1-2, 2002

**Goal:** To develop a list of monitoring objectives and potential indicators to determine the vital signs of ecosystem health.

Parks: Abraham Lincoln National Historic Site, Cumberland Gap National Historic Park, Fort Donelson National

Battlefield, Stones River National Military Park

### Wednesday, May 1st

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10:00-10:15	Welcome/Introductions		
10:15-10:45	IM Servicewide Overview - Larry West, SERO		
10:45-11:30	Vital Signs Process - Teresa Leibfreid, CPN		
11:30-12:30	Lunch		
12:30-2:30	Park's Significant Natural Resources		
	ABLI Overview – Gary Talley		
	CUGA Overview – Ries Collier		
	FODO Overview – <i>Jimmy Jobe</i>		
	STRI Overview – Gib Backlund		
2:30-2:45	Break		
2:45-3:45	Ecological Communities- Rickie White, NatureServe		
3:45-4:45	Bird Conservation Planning- Keith Watson, FWS		

#### Thursday, May 2<sup>nd</sup>

(Central Daylight Time)			
8:00-9:15	Air Quality– Tonnie Maniero, ARD		
9:15-10:15	Water Quality- Joe Meiman, MACA		
10:15-10:30	Break		
10:30-11:30	Exotics- Joe Rogers, GRSM		
11:30-12:30	Lunch		
12:30-1:00	Fire Monitoring- Caroline Lansing, NPS-TallTimbers		
1:00-1:30	CESU Program Overview- Ray Albright, NPS		
1:30-1:45	Break		
1:45-3:00	Mgmt Issues and Monitoring Questions - Group Discussion		

# Worksheet for Significant Natural Resources

PARK	TIME PERIOD	Significant to ENABLING LEGISLATION	Significant to Other Legal Mandates/ Policy	Significant to Performance Mgmt Goals	Significant for Other Reasons
ABLI	1808- 1816	Sinking Spring	Sinking Spring Cave, wetlands, State listed Species of Concern	Exotic plant control, Vital Signs	Old growth forest, rock shelters, cave species, glades. Unusual diversity and abundance of plant life
CUGA	Pre- history to Civil War	General reference to geologic formations	Black side dace, Indiana bat, proposed wilderness, caves, State listed Species of Concern, wetlands	Exotic plant control, Water quality, T&E species, Vital Signs	Limestone cliffs, rock shelters, elk, forest pests
FODO	1862	Cultural landscape	Wetlands, Price's Potato Bean, State listed species,	Exotic plant control, T&E species Vital signs	Earth works vegetation
STRI	1862- 1866	Cultural landscape	T&E species (TN coneflower, Pyne ground plum), cave, State listed species	Exotic plant control, T&E species, Disturbed lands, Vital signs	Earth work restoration, cedar glades, deer & groundhog problems

# Worksheet for Management Issues

PARK	RANK	Management Issues	Management Questions	Potential Indicators	Potential Management Actions
ABLI CARL COWP CUGA FODO GUCO KIMO NISI LIRI RUCA SHIL STRI MACA	HIGH HIGH MED LOW HIGH LOW MED MED HIGH LOW	AIR RESOURCES:  Ozone Visibility Deposition Toxins  Radioisotopes Nitrification  Dry and wet acid deposition	Are high levels of O <sub>3</sub> impacting plants or other resources? What toxins are present in air and are they being transported through ecosystem? How is visibility being impacted over time? Does deposition pose a threat to natural resources?	Exotic plant control, Vital Signs Exotic plant control, Water quality, T&E species, Vital Signs Exotic plant control, T&E species Vital signs Exotic plant control, T&E species, Disturbed lands, Vital signs	O₃ sensitive plants. Water quality. Sediment, snow.  Levels of positively charged soil nutrients. Soil pH, composition of soil microbial community, plant species sensitive to soil pH and calcium levels such as ginseng. Soil and water aluminum concentrations. Condition of fish and mussel gills.

# Partners in Phase I Vital Signs Process:

Air Resources Division Appalachian Highlands Network Staff & Parks Cumberland Piedmont Network Staff & Parks Fire Effects Monitoring Team-Southeast Region Fish and Wildlife Service Great Smoky Mountains-LTEM, Exotics, Air Mammoth Cave National Park-LTEM, Water, Air NatureServe-Vegetation Classification Southeast Regional Office Staff University of Tennessee-Conceptual Models University of Georgia-Vegetation Maps USGS-Biological Resources Division Water Resources Division

# Mammoth Cave Water Lab



## University of Tennessee/Cooperative Ecosystem Study Unit Development of Conceptual Models



# Staff of Cumberland Piedmont Network:

Network Coordinator: Teresa Leibfreid (MACA)

Data Management: Shepard McAninch (KIMO) 2yr Term
Tom Diggs (RUCA) 2yr Term

Sammi Jo Doyle (MACA) Half-time

GIS Assistance (SCA), 6-months

1 Perm Data Manager (vacant)

Hydrology: Joe Meiman, Hydrogeologist (detail)
Katie Seadler, HydroTech (50%)



Technical Committee:

Ray Albright, NPS Coordinator - Appalachian CESU

Mary Belue, Resource Management Specialist, LIRI

Tom Blount, Chief of Resource Management, BISO

Reis Collier, Chief of Resource Management, CUGA

Robert Emmott, IM Coordinator, AHN

Keith Langdon, LTEM Coordinator, GRSM

Teresa Leibfreid, IM Coordinator, CPN

Nora Murdock, Ecologist, AHN

Bambi Teague, Natural Resources Specialist, BLRI

Steve Thomas, LTEM Coordinator, MACA

(vacant) Data Manager, CPN



# Cumberland Piedmont Network

# PHASE I SUMMARY

Spring 2002: 3 Vital Signs Workshops worked well to compile park input on significant resources, management issues, and current monitoring activities.

Summer 2002: A Conceptual Model Workshop to develop models and gain input from outside experts is in progress. Two data managers hired to cover parks in the eastern and southern part of network.

Fall 2002: Phase 1 of Monitoring Plan Due.....going to be a challenge to pull everything together by end of the year!